

## HEAT FUEL

OF THE PAST YEAR IN

**FACTURE AND USE OF PEAT FUEL.**  
At the close of our last article, published in THE TRIBUNE last year, we intimated the intention of renewing the subject whenever the case warranted or the public seemed to demand. That time has arrived. There are continual inquiries: What are the results of the last year's operations? Has the peat business likely to prove a success? For what purposes is this fuel best adapted? And what machinery for its preparation has proved the most successful?

**PEAT IN THE DISMAL SWAMP.**  
The Dismal Swamp is probably the largest available peat deposit in America, if not in the world; and its availability arises in a great measure from the fact that a canal large enough for small steamboats traverses its center. Its extent was first discovered

by the surveyors of the  
State Line. It remains

the California State Line. It requires eight days of labor to make the passage where that line crosses the swamps. Although its surface is covered with roots that a person can travel over, it is a path in any way where be thrust down from 10 to 15 feet through a dense growth of roots. The growth is everywhere covered with a dense growth of timber or smaller plants which have been growing and decaying from time immemorial. All this has misled the substance of which peat is formed, to wit, that it is a substance which is formed contrary to the received scientific opinion that it is formed only in cold climates. The evidence the company is here patent. Two companies at least have been organized, and have several of Swift's Peat Machines at work upon the banks of the Sacramento and the San Joaquin rivers.

## condensed peat. The Great Dismal Swamp Canals.

of their work. The company, Canada, would be so much pleased with this fuel that they have consented to take all the companies make with their present facilities, at \$8 per ton. Other applicants for the fuel are already numerous, and a coal-dealer from Richmond has made written application to them to secure control of the entire product of their works for that market. The cost of labor there is much less than at the North, as they employ freed-

el which cannot be excel

any other northern region.

In doing so, the roots of the trees and shrubs are all upon the surface or not over one foot below; then the mass is perfectly plastic, yet so firm at it can be cut into cakes of any size that can be handled.

Much of the Distinal Swamp lands are not covered with timber, but contain a buried forest, some of the trunks of which are as sound as they were ages ago. In fact, it is a kind of petrified forest. This is well as in other peat swamps generally, though, during the time of Slavery, the deepest recesses of the swamp were always inhabited by negroes who would cut a slit in the peat and dig out a log of water. As the whole ground becomes navigable as it is cleared of peat, it can be excavated by steam dredges, carried in bunts to the condensing machines, and from thence shipped to the mill.

During the canal. The water of Lake Drummond is remarkably clear, although of a reddish color. Upon part of the area no bottom has yet been found, but the water from the deep deposits a quality that near the surface, the peat appears to have the same antiseptic qualities as that of the bog. One of the peculiarities of the Distinal swamp water is that it is not fit to drink at sea.

PEAT IN CANADA.

We will now transfer the reader from the extreme Southern limit of the peat deposit to one far North,

t-fields of Canada. Mr. Jan  
one more than any other in

wealth of that dominion lying buried and useless  
peat-swamps. He has conceived the idea of  
peat manufacture which would be very suitable for  
operations in the Dismal Swamp, that is, a boat to  
float about in the bog carrying steam machinery, ex-  
tracting, packing, and shipping the peat directly by  
a barge or block of peat until they could be hauled and  
carried to a storehouse where the cargo could be  
shipped. The material being excavated as it went, and spreading the  
material by steam-power upon either bank  
of the river, and finally piled in the sun. In this

would be spread in a thick  
a within reach of the

is dried until the surface begins to crack, a roller would be drawn over it, cutting it into suitably-sized blocks, which, in due time would be dry enough to hake. In about a fortnight of good weather these blocks would shrink and crack entirely apart, giving the appearance of a vast floor covered with black bricks 18 inches long and 6 inches wide. The haking process consists in setting up these blocks on end with axes under the top to hold them in place until they are dry enough to store, or else leaving half a dozen together like sheaves of grain.

the Dismal Swamp, not  
working a peat-bed upon

n. Some persons have supposed it would be necessary to dig out roots of trees by hand. That is so. We have seen the steam excavator at work the marl beds of New-Jersey upon exactly the same principle as it would work upon a peat-bed where the overlying ground was covered with a heavy growth of oak trees. The stumps of these were pulled up and thrown aside with apparently as much ease as a boy would pick up and throw a stone or a bird. When the stumps, roots, dirt, and stone were all cleared away, then the machine lifted and emptied a tun of marl into a railroad car, and repeated the operation until the full load was filled.

ll see that the more water  
easier it is to generate

eat-bog the easier it is to excavate and carry the substance to dry land. Almost the entire work is done by steam-power, and from numerous actual experiments made within the past year in various parts of the country from Virginia to Nova Scotia it has been fully proved that no better fuel than condensed steam was ever used in the furnace of a steam-boiler.

enced on a very large l  
l said to contain 3,000 ac

ing from four to fourteen feet. It is believed the bog will yield 5,000,000 tons of peat fuel, which is very valuable in a country where coal is so scarce and where the immense primitive forests are rapidly disappearing. The conveniences for transportation are great, as the bog is only three quarters of a mile from the canal. It is said this bog contains much rosin, which makes it valuable for glass manufacturers. It is also valuable for iron and copper. There is no doubt of an increased demand for such fuel in that section. We were informed by Mr. Leavitt that applications for his machines are numerous from Canada, particularly by those who wish to operate them on private

**PEAT FOR RAILROADS.**  
 Peat is used to a limited extent

The fact that in no one place has there yet been manufactured a quantity of the fuel sufficient to insure a steady and unlimited supply appears to be the only reason why it is not now the standard fuel of the several prominent roads, whose experience has been that if they would gladly use it in preference to wood or coal if the supply was forthcoming. Its cost and value being established, it now awaits the necessary enterprise to enter upon the manufacture and ready the quantity required. The

for it, and only waits the  
marks apply with equal fo

Results of numerous trials have been reported to the committee, and the experience made by Mr. Hodges on the Grand Trunk Railroad are given so much more fully, and in detail, than most that we have been able to obtain, that we quote them here, with the comment that they are quite similar in character to others we have received.

The trips run upon the Grand Trunk Railroad are upward of 100 miles in extent. We have heard of the trip of the engineers who ran those

views fully corroborate  
an say of the value of pent

provided the furnaces are properly constructed, they require less draft than those made for coal, and much less capacity than those made for wood, the amount of blast required for green peat is not so great as that required for wood, but it burns well in a furnace arranged for consuming wood. A small blast is required; and, when dry peat, very hard and adapted for wood, the fuel has to be supplied in such small quantities that it is scarcely possible to keep the fire-bars covered, without raising more than is required. The maximum of work may

out of green peat, the experiment repeating many times to give

of what it will do in properly-constructed furnaces, with a suitable amount of blast.

An experiment was made with well-dried peat fuel upon engine No. 12, five foot driving wheels, sixteen-inch cylinders, and twenty-six inch stroke, drawing in loaded condition 100 tons.

Distance run per ton of 2240 lb of fuel . 46.33 miles.

Fuel used per mile . . . . . 55.34 lb.

Greatest pressure of steam . . . . . 120 ".

Least pressure of steam . . . . . 100 "

During the experiment, fuel was put on in small quantities, no smoke issued from the stack, a steady brilliant white fire was kept up, and steam generated with great rapidity. The damper was kept closed, and the air admitted